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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/642,154	08/21/2000	Steve Duncan	0054-0219P-SP	7758

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Falls Church, VA 22040-0747

EXAMINER
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TSE, YOUNG TOI

ART UNIT	PAPER NUMBER
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2637

DATE MAILED: 02/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/642,154	<b>Applicant(s)</b> DUNCAN, STEVE	
	<b>Examiner</b> YOUNG T. TSE	<b>Art Unit</b> 2637	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 15 October 2004.  
2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-3,5-7 and 13-16 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-3,5-7 and 13-16 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.  
10) ☒ The drawing(s) filed on 15 October 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All    b) ☐ Some \*    c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Drawings*

1. The drawings were received on 15 October 2004. These drawings are acceptable.
2. The drawings are objected to because the block elements 24 and 30 labeled as "ABSOLUTE VALUE CONVERTER" shown in Figure 3 of the replacement sheet do not correspond to the specification mentioned on page 6, line 3 and page 7, line 2. According to the specification, block element 24 appears to be a delay element and block 30 appears to be a multiplier. Further, in Figure 2, Applicant is requested to label the boundary between symbols  $i-1$  and  $i$  and the beginning boundary of the second Ng. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet"

pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Claim Objections***

3. Claims 1-3, 5-7 and 13-16 are objected to because of the following informalities:

In claim 1, line 5, "useful period" should be "useful symbol period" and line 9, "absolute values" appears to be "the absolute values".

In claim 2, line 2, "absolute values" appears to be "the absolute values".

In line 1 of claims 13-15, "The method" should be "A method".

Wherein claims 3, and 5-7 are depended upon claim 1.

In claim 16, line 3, "an OFDM signal" should be "the OFDM signal"; line 5, "useful period" should be "useful symbol period"; line 11, "a synchronization pulse" should be "the synchronization pulse"; and line 13, "absolute values" appears to be "the absolute values".

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claims 1-3, 5-7 and 13-16 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

The configuration of claims 1-3, 5-7 and 13-16 does not correspond to the disclosure of Figure 3.

For example, claims 1 and 16 recites a method or apparatus for generating a synchronization pulse for an OFDM signal, comprising:

a device for receiving an OFDM signal including useful symbol periods separated by guard spaces, with data each guard space corresponding to part of the data in a respective useful symbol period;

a first circuit for determining and monitoring the difference between the absolute values of samples of the OFDM signal separated by period corresponding to the useful symbol period; and

a second circuit for generating a synchronization pulse response to said first circuit detecting a substantial change in the difference between the absolute values.

However, Figure 3 shows two separate subtraction circuits 22 and 32 for subtracting an absolute value, wherein the output of the first subtraction value is provided to an absolute value converter 26 and the output of the second subtraction value is provided to a rising edge detector 38 and a peak detector 40.

Therefore, it is unclear from Figure and the specification that which elements are the device, the first circuit and the second circuit.

Further, the specification fails to explain which element(s) of Figure 3 generates the synchronization pulse as recited in the claims.

Claim 3 recites an IIR filter is used for providing the integrated values, however, as shown in Figure 3, no filter is disclosed within the integrator circuit 28.

Furthermore, the claimed subject matter of the demodulating and synchronizing steps appeared no mention in the specification.

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claim 15 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 15, line 5, the phrase "the OFDM symbols" lacks antecedent basis.

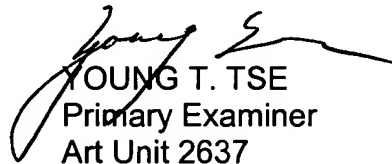
#### ***Allowable Subject Matter***

8. Claims 1-3, 5-7 and 13-16 would be allowable if rewritten or amended to overcome the objection(s) and the rejection(s) under 35 U.S.C. 112, 1st paragraph and 2nd paragraph, set forth in this Office action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to YOUNG T. TSE whose telephone number is (571) 272-3051. The examiner can normally be reached on Monday and Wednesday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel can be reached on (571) 272-2988. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
YOUNG T. TSE  
Primary Examiner  
Art Unit 2637